Biological Activities for Extracts of Amor Seco *(Desmodium adscendens)*

Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Ghana	Antiasthmatic Activity	Plant	Oral Human Adult	3.0 gm	Active	1-2 teaspoonfuls of dry powder, given in 3 divided doses daily, prevented asthma.	L02543
Leaf Ghana	Antiasthmatic Activity	BuOH Ext	Guinea pig trachea	0.5 mg/ml	Active	Vs. arachidonic acid-induced contractions on indomethacin-pretreated tracheal spirals, a leukotriene-dependent reaction.	M21173
			Guinea pig lung	0.5 mg/ml	Inactive	Vs. arachidonic acid-induced contractions of lung parenchymal strips, a thromboxane-dependent reaction.	
Leaf Ghana	Antiasthmatic Activity	H2O Ext	Guinea pig lung	0.3 mg/ml	Active	Vs. ovalbumin-induced contraction of lung parenchymal strips from ovalbumin sensitized animals.	M16812
		H2O Ext	Guinea pig trachea	0.3 mg/ml	Active	Vs. ovalbumin-induced contraction of tracheal spirals.	
		H2O Ext	Guinea pig trachea	0.3 mg/ml	Active	Vs. arachidonic acid-induced contractions.	
		H2O Ext	Guinea pig lung	0.9 mg/ml	Active	Vs. arachidonic acid-induced contractions.	
Leaf + Stem Ghana	Antiasthmatic Activity	Hot H2O Ext	PO Guinea pig	5-20%	Active	Dosing for 21 days.	T12673
Leaf Ghana	Antiallergic Activity	BuOH Ext	Guinea pig lung & trachea	Not stated	Active	Inhibited allergic airway smooth muscle contraction at multiple sites.	M21173
Leaf + Stem Ghana	Antihistamine Activity	Hot H2O Ext	PO Guinea pig	5-20%	Active	Dosing for 21 days. Inhibition of histamine-induced ileal contraction.	T12673
Leaf + Stem Ghana	Antianaphylactic Activity	ETOH(95%)Ext	IG Guinea pig	Not stated	Active	Decreased the anaphylactic response in ileums isolated from treated animals by 48%. vs.albumin induced contraction.	M06094
		ETOH(95%)Ext	IG Guinea pig	Not stated	Active	Decreased the anaphylactic response in ileum isolated from treated animals.	
		ETOH(95%)Ext	IG Guinea pig	Not stated	Active	Vs. histamine-induced contractions.	

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Leaf + Stem Ghana	Antianaphylactic Activity	H2O Ext	IG Guinea pig	Not stated	Active	Decreased the anaphylactic response in ileum isolated from treated animals. Reduced the amount of smooth muscle stimulating substances released from the lung tissue. Decreased the anaphylactic response in ileums isolated from treated animals by 65%. vs.albumin induced contraction.	M06094
Leaf + Stem Ghana	Antianaphylactic Activity	Hot H2O Ext	PO Guinea pig	5-20%	Active	Dosing for 21 days. Reduced anaphylactic-induced contraction of ileal muscle and the amount of spasmogens released anaphylactically.	T12673
Leaf France	Anticonvulsant Activity	ETOH Ext	Mice Rat	Not stated	Active Active Active Inactive Inactive	Suppressed the tonic phase of convulsion and mortality induced by pentylenetetrazole (PTZ). Delayed the onset of PTZ forelimb clonus. Delayed the onset of generalized limbic seizures induced by kainic acid. No effect on tonic convulsion induced by maximal electroshock. No effect on progression of limbic seizures to epilepticus.	AF1005
Leaf Ghana	Smooth Muscle Relaxant Activity	BuOH Ext	Guinea pig trachea	0.5 mg/ml	Active	Ovalbumin-induced contractions inhibited in the presence and absence of indomethacin.	M21173
Leaf Ghana	Smooth Muscle Relaxant Activity	H2O Ext	Guinea pig trachea Guinea pig trachea Guinea pig trachea Guinea pig lung	0.09 mg/ml 0.09 mg/ml 0.3 mg/ml 0.9 mg/ml	Active Active Active Inactive	Histamine-induced contractions were enhanced. Leukotriene d-4-induced contractions were enhanced. Carbachol-induced contractions were enhanced. Histamine-induced contractions were unchanged by the drug.	M21171

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Leaf Ghana	Smooth Muscle Relaxant Activity	H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext H2O Ext	Not stated lung Not stated trachea Not stated trachea Not stated lung Not stated lung Not stated lung Not stated trachea Not stated trachea Not stated trachea	0.03 mg/ml 0.03 mg/ml 0.03 mg/ml 0.30 mg/ml 0.30 mg/ml 0.30 mg/ml 0.30 mg/ml 0.30 mg/ml 0.30 mg/ml	Active Active Active Inactive Active Active Inactive Active Active	Vs. antigen-induced contractions. Vs. antigen-induced contractions. Vs. antigen-induced contractions. Vs. arachidonic acid-induced contractions. Vs. histamine-induced contractions. Vs. carbachol-induced contractions. Vs. arachidonic acid-induced contractions. Vs. carbachol-induced contractions. Vs. histamine-induced contractions.	M23957
Leaf Ghana	Smooth Muscle Relaxant Activity	BuOH Ext	Guinea pig lung & trachea	1.5 mg/ml	Active	Vs. ovalbumin-induced contractions.	M21173
Not Stated Brazil	Smooth Muscle Relaxant Activity	BuOH Ext	Guinea pig ileum & trachea	Not stated	Active	Inhibits contractions.	AF1003
Not Stated Brazil	Smooth Muscle Relaxant Activity	BuOH Ext	Rat anococcygeus muscle	Not stated	Active Inactive Inactive Active	Relaxed contractions induced by high potassium. No effect on contractions induced by phenylephrine. Relaxation not altered by methylene blue. Reduced response to calcium.	AF1003
Leaf Not Stated	Spasmolytic Activity	Fraction: Saponins	Muscle (unspecified)	Not stated	Active Inactive Inactive Inactive	Vs. antigen-induced contraction. Vs. arachidonic acid-induced contractions. Vs. carbachol-induced contractions. Vs. histamine-induced contractions.	K08073
Leaf Not Stated	Spasmolytic Activity	Fraction: Saponins	Guinea pig ileum	Not stated	Active	Vs. electrically induced contractions.	K08073
Leaf + Stem Ghana	Antispasmodic Activity	Chromatographic fraction	Guinea pig ileum Guinea pig ileum Guinea pig lung Guinea pig lung Guinea pig trachea Guinea pig trachea Guinea pig trachea Guinea pig lung	Not stated Not stated Not stated Not stated Not stated Not stated Not stated Not stated	Active Active Active Active Active Active Active Inactive	Vs. electrically induced contractions. Vs. histamine-induced contractions. Vs. ovalbumin-induced contractions of lung parenchymal strip. Vs. histamine-induced contractions. Vs. ovalbumin-induced contractions. Vs. histamine-induced contractions. Vs. carbachol-induced contractions. Vs. carbachol-induced contractions.	M20882

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Leaf + Stem Ghana	Antispasmodic Activity	Hot H2O Ext	In drinking water Guinea pig ileum	5-20%	Active	Vs. histamine-induced contractions.	T12673
Not Stated USA	Potassium ion Channel Opener	Not stated	Bovine tracheal smooth muscle	Not stated	Active	Inhibits binding of monoiodotyrosine charybdotoxin to receptor sites in smooth muscle membranes that are associated with calcium-dependent potassium channels (maxi-K).	K11866
Leaf Ghana	Leukotriene Inhibition	BuOH Ext	Guinea pig lung & trachea	Not stated	Active	Inhibited the synthesis and/or activity of the bronchoconstrictor leukotrienes.	M21173
Leaf Ghana	Thromboxane Inhibition	BuOH Ext	Guinea pig lung & trachea	Not stated	Inactive		M21173
Leaf + Stem Ghana	Arachidonate Metabolism Inhibition	BuOH Ext	Human adult microsomes	2.0 mg/ml	Active	NADPH-dependent metabolism of arachidonic acid in kidney cortical microsome was inhibited by extract, as shown by decreased amounts of epoxy eicosatrienoic aicds, 19- and 20- hete and monohydroxy eicosatetraenoic acids.	K08875
Leaf Ghana	Arachidonic Acid Inhibition	H2O Ext	Guinea pig lung & trachea	Not stated	Active	Inhibits the release of free arachidonic acid.	M23957
Leaf + Stem Ghana	Cyclooxygenase Stimulation	BuOH Ext	Not stated	0.1 mg/ml	Active	Activity dependent on enzyme concentration and presence of GSH. Increase of PgE2 and decrease of PgF2-alpha.	K21627
Not Stated Ghana	Cytochrome P-450 Inhibition	BuOH Ext	Not stated	Not stated	Active	Formation of arachidonic acid derivatives via monoxygenase system was inhibited.	K08073
Leaf France	Hypothermic Effect	ETOH Ext	Mice	Not stated	Active	Induced hypothermia	AF1005
Leaf France	Analgesic Activity	ETOH Ext	Mice	Not stated	Active		AF1005
Not Stated Japan	Antioxidant Activity	Not stated	Cell Culture	Not stated	Inactive	Vs. DPPH radical and lipid peroxidation induced by H2O2.	AF1004

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Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Ghana	Smooth Muscle Stimulant Activity	H2O Ext H2O Ext H2O Ext	Guinea pig lung Guinea pig trachea Guinea pig lung	0.9 mg/ml 0.9 mg/ml 0.9 mg/ml	Active Active Inactive	Vs. leukotriene-d-4-induced contractions. Vs. histamine-induced contractions. Vs. carbachol-induced contractions.	M21171

Biological Activities for Compounds of Amor Seco *(Desmodium adscendens)*

Compound Tested	Activity Tested For	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Astragalin	Histamine Inhibition	Cell Culture	Not stated	Active	Inhibited histamine release by basophils.	AF1006
Astragalin	Histamine Inhibition	Cell Culture	Not stated	Active	Inhibited the release of histamine by the human basophilic cell line KU812.	AF1007
Astragalin	Antidermatitis Activity	Oral Mice	1.5 mg/kg	Active	Reduced the severity of pre-existing dermatitis and prevented the development of atopic dermatitis.	AF1006
Astragalin	Antidermatitis Activity	Oral Mice	Not stated	Active	Reduced the development of atopic dermatitis, scratching behavior and serum IgE elevation. Histology revealed reduced infiltration of inflammatory cells, degranulated mast cells, thickening of the epidermis and hyperkeratosis.	AF1007
Beta-phenylethylamines	Prostaglandin Inhibition	Ram seminal vesicles	Not stated	Inactive	Resulted in the formation of more prostaglandins.	K08073
Dehydrosoyasaponin I	Potassium Ion Channel Opener	Bovine tracheal smooth muscle	10 nM	Active Inactive	62% inhibition of monoiodotyrosine charybdotoxin binding to receptors sites in smooth muscle membranes that are associated with calcium-dependent potassium channels (maxi-K channels). Non-maxi-K channels.	K11866
Dehydrosoyasaponin I	Potassium ion Channel Activator	Bovine aortic smooth muscle	100 nM	Active	Caused a threefold decrease in the concentration of calcium required to open calcium-activated potassium (maxi-K) channels.	AF1017

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Compound Tested	Activity Tested For	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Hordenine	Gastrointestinal Activity	Mice	Not stated	Active	Inhibited gut movements.	AF1008
Hordenine	Adrenergic Activity	Horse	Not stated	Active	Liberated norepinephrine from stores.	AF1008
Hordenine	Cardiovascular Activity	Mice	Not stated	Active Active Active	Positive inotropic effect upon the heart. Increased systolic and diastolic blood pressure. Increased peripheral blood flow volume.	AF1008
Soyasaponin I	Toxicity(general)	Rat hepatocytes	500 mcg/ml	Active		AF1013
Saponin fraction	Spasmolytic Activity	Muscle (unspecified)	Not stated	Active Inactive Inactive Inactive	Vs. antigen-induced contraction. Vs. arachidonic acid-induced contractions. Vs. carbachol-induced contractions. Vs. histamine-induced contractions.	K08073
Saponin fraction	Spasmolytic Activity	Guinea pig ileum	Not stated	Active	Vs. electrically induced contractions.	K08073
Saponin fraction	Potassium ion Channel Activation	Smooth muscle	Not stated	Active	Calcium-activated potassium ion channel activated by the saponins.	K08073
Soyasaponin I	Calcium Channel Blocking Activity	Rat ventricular myocardiocyte	2 mcg/ml	Active		AF1015
Soyasaponin I	Cardiovascular Activity	Rat ventricular myocardiocyte	2 mcg/ml	Active	Decreased the number of spontaneously beating clusters and action potential parameters of myocardiocytes.	AF1015
Soyasaponin I	Sialyltransferase Inhibitor	Cell Culture	2.1 microM	Active	Hypersialylation is observed in oncogenic transformation, tumor metastasis and invasion.	AF1009
Soyasaponin I	Anti-tumor promoting Activity	Mouse	Not stated	Active	Skin tumor promotion.	AF1016
Soyasaponin I	Antiviral Activity	in vitro	Not stated	Active	*Herpes simplex virus* type-1.	AF1010
Soyasaponin I & III	Hepatoprotective Activity	Rat hepatocytes	Not stated	Active	Hepatoprotective against immunologically induced liver injury.	AF1011
Soyasaponin III	Hepatoprotective Activity	Rat hepatocytes	30 microM	Active		AF1012
Soyasaponin I	Hepatoprotective Activity	Rat hepatocytes	Not stated	Active	vs. liver injury induced by CCl4. Inhibited the elevation of GOT and GPT.	AF1013
Soyasaponin I	Antioxidant Activity	Mouse fibroblast cells	Not stated	Active	Inhibited hydrogen peroxide.	AF1014

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Compound Tested	Activity Tested For	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Tetrahydroisoquinolines	Prostaglandin Inhibition	Ram seminal vesicles	Not stated	Active		K08073
Tetrahydroisoquinolines	Cytochrome P-450 Inhibition	Not stated	Not stated	Active	Monoxygenase metabolites of arachidonic acid assayed.	K08073

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